

Canadian Journal of Psychology

THE JOURNAL OF THE CANADIAN PSYCHOLOGICAL ASSOCIATION

Volume I, 1947

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MARION MACDONALD (*British Columbia*); J. TUCKMAN (*Quebec*); GORDON TURNER (*Ontario*); W. H. D. VERNON (*Maritimes*); D. C. WILLIAMS (*Prairie Provinces*)

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Canadian Journal of Psychology

FOREWORD BY THE PRESIDENT

WITH the publication of this, the first issue of the *Canadian Journal of Psychology*, another important milestone in the advance of psychological studies in Canada has been passed. For six years the Canadian Psychological Association has published a Bulletin. This is now replaced by a quarterly journal, which will provide a much more adequate medium for the publication in Canada of scholarly and scientific works. The change, therefore, is far more than one of name. The new journal begins with a modest issue of forty-eight pages, but with every prospect of expansion in the near future, if the members of the Association give it wholehearted co-operation.

The Canadian Psychological Association was created just before the Second World War, and as a new and vigorous national organization played an important part in the mobilization of Canadian psychologists for the conflict. Without such a national organization it would not have been possible to achieve so effective a co-ordination of effort. We have reason to be very proud of the part played in the war by Canadian psychologists. The members of the Canadian Psychological Association have now turned to the challenging problems of peacetime. In the advancement of vital research, publication facilities are a paramount necessity. The Council of the Association has given consideration to this need, and the establishment of this new journal is an immediate result.

The Canadian Psychological Association has been fortunate in its editors. Dr. D. O. Hebb, the first editor of the Bulletin, and his successor, Dr. J. A. Long, have earned the gratitude of the members of the Association for their valuable work. Miss Kathleen M. Hobday as assistant editor has been responsible for much of the detailed work in connection with the publication of the Bulletin. When plans were being made for the new journal, the Executive of the Canadian Psychological Association was pleased to be able to secure the continued services of Dr. Long as editor and Miss Hobday as assistant editor. Consulting editors representing all parts of the Dominion were selected and appointed to aid in the editorial work and to ensure that the journal would be truly national in scope. We are confident that this editorial group will give most efficient direction, and, with the technical assistance of the editorial staff of the University of Toronto Press, will produce a journal of which the Association will be proud.

That there was need for such a journal is shown by the fact that more than twenty members of the Association have signified their intention of submitting articles for publication during the present year. That the

Journal will be national in scope is indicated by the fact that these members represent nearly every section of Canada. It will be noticed that the first issue contains articles from members living in four different provinces, and that these articles represent work in academic, industrial, and national defence areas. It is fitting that the first article in this number has been written by Professor E. A. Bott, for he was not only the first President of the Association, but also the first Fellow to be elected by it.

The financial burden involved in the publication of a journal of this kind is not a light one. In the present instance the limited revenue of the Association could not have met the entire cost. A happy solution to this difficulty was found when, in the interests of scholarly publication in Canada, the University of Toronto Press agreed to share the financial burden with the Association. The Canadian Psychological Association is indeed grateful to the Advisory Committee on Publications of the Press for their generous co-operation in this venture.

The active support of the members of the Association will be required to make the Journal the success that we expect it to be. The next step—which the Executive hopes will not be long delayed—will be a material increase in the size of the Journal. This will be done as soon as increased revenue as well as increased material for publication warrants. As President, I would say to all members of the Association—"This is our Journal. Let us support it and work for its continued expansion and improvement."

KARL S. BERNHARDT

A NOTE TO CONTRIBUTORS

The *Canadian Journal of Psychology* is a quarterly, appearing in March, June, September and December. Although it is the official organ of the Canadian Psychological Association, material for publication will be welcomed from non-members. Since the Journal must necessarily reflect the interests of the entire Association membership, it will not be devoted exclusively to any particular branch or branches of psychology.

Manuscripts should be sent to the Editor, 371 Bloor Street West, Toronto 5. These should be typed, double spaced, and authors should go to some pains to see that the material is in a form which will require the minimum of editing.

It is difficult to put definite limitations on the length of articles to be submitted. The editors' views in this matter will necessarily be conditioned by the pressure, or lack of pressure, of material available for publication. The lengths of articles in current issues might serve as a rough guide to the contributor. For the present, five thousand words might be considered an upper limit. Tables and graphs are costly to reproduce and should be avoided where they are not essential.

Reprints of articles, either free or at a charge, will be supplied to authors only when a request for them accompanies the manuscript. Twenty-five reprints will be supplied free: beyond that, they will be supplied at approximately 50 cents per page per hundred.

JOHN A. LONG

Review for GL
Psych. LSA
Dated
6-19-56
1423 (V.I. no. 1-4)

PROBLEMS IN THE CERTIFICATION OF PSYCHOLOGISTS

E. A. BOTT
University of Toronto

REPORT GIVEN AT THE ANNUAL BUSINESS MEETING OF THE CANADIAN
PSYCHOLOGICAL ASSOCIATION, MAY 15, 1946

CERTIFICATION is too important a matter to Psychology and psychologists to be covered adequately in a brief report such as this must be. An explanation is due the Association of the circumstances responsible for the assignment of this subject for discussion here and for the form which the report will take.

Certain changes adopted in the Constitution and By-laws of the Association at the last annual meeting, May 1945, led the Executive to decide that before taking direct action on the new By-law I (organization of a Board of Certification) the whole question of certification should be thoroughly studied. With this in mind the secretary-treasurer wrote me in October on behalf of the Executive asking if I would undertake such a study for them. Procedure was not suggested. While willing to assist as best I could, what I have done has not included any systematic canvass of the present situation or opinion in Canada. Having been an absentee member of our Association for some years while important developments in applied psychology were taking place here as in other countries, I am not in a position to do more than view the question in terms of principles and general trends, taking some account of progress made in this matter south of the line and across the ocean.

In April our secretary followed up his request with the proposal that 'my committee' report about certification at this Kingston meeting. While I am not a committee of the Association, I wish to thank you for the honour of making me a Fellow at this time. In any event, the views to be expressed are only my own, and may not be representative. I should like, however, to acknowledge certain valuable assistance I have received. Professor Humphrey, our regional representative for Canada on the American Psychological Association, has obtained from the appropriate officers of the American Psychological Association, up-to-date information on the steps towards certification now being taken in the United States. I am indebted also to Mr. Alex Rodger and others in Britain with whom I have corresponded regarding developments since I left there in July, 1945.

APPROACH TO THE PROBLEM

Broadly, the question of certification is not new. Procedures have been worked out for many other fields, though in no case were these quickly or easily accomplished. For Psychology it should be possible to solve the problem in time, provided the necessary conditions are recog-

nized and met. Canadian psychologists can find useful precedents both in approaches made by other professional groups and in the steps taken thus far by psychological groups elsewhere, particularly in the United States, and in other parts of the Empire. Reference will later be made to some of these.

The experience of others warns us of the importance of the attitude we take individually and as a group to this issue. The substitution of an emotional attitude for a more objective view has been known before to deflect the efforts for certification in mistaken directions with a loss of ground for a considerable time. To press for some particular solution merely from the fact that the problem calls for solution, and to insist even to the point of risking precipitate action, may be an outlet for impatience but is not the way to a successful solution. A more objective approach would first analyze what certification actually involves, taking note of the important objectives, the resources possessed or needed for meeting them, and the most feasible constitutional means for attaining the desired ends, perhaps step by step.

OBJECTIVES AND RESOURCES

The C.P.A. was established eight years ago. Our Association is genuinely national in scope and aim, is united and enthusiastic in outlook and has been highly motivated from the outset to contribute both scientifically and practically to our field. As a non-participant I feel justifiably proud of the war record of the Association and its members here in Canada. Our members, though not numerous (under 250 in February 1946), are well represented in Universities and until recently in War Services, as well as in many governmental and private organizations and in private practice.

The Constitution of the Association (as now amended) affords a basis through which we can advance. It clearly defines objectives, means and certain specified activities. These may briefly be recalled for our present purpose. Under Article II the object is 'to promote the advancement *and* practical application of psychological studies in Canada'. Three means are mentioned, namely, by teaching, discussion and research. Recognized activities are also of three sorts: (a) to receive and use money, hold meetings, issue publications; (b) assist Governments and other organizations, specifying the fields of Education, Health, Justice, Industry and Defence, with the possible inclusion of other social and national problems, (e.g. assessment of public opinion, etc.); (c) other activities calculated to further the Association's objectives.

The last of these items may be interpreted to include certification as an Association activity. If so, it should be noted that this must then lead us beyond the above defined means, viz. teaching, discussion, research.

A first move towards employing additional means was made last year in framing By-law I. A Board of Certification was to be organized with five powers which concerned respectively, the defining of certification standards, examining of applicants, issuing of certificates, establishing an office of registration, charging a fee. This move, whether regarded as a proposal, as a decision, or as an instruction, at least raises the issue of analyzing what certification actually involves.

FACTORS IN CERTIFICATION

I propose to examine this problem in general terms under five heads.

- (i) A first factor, as By-law I suggests, would be criteria for *Qualification of Competence*. Conceivably this criterion might be simply membership in the Association, or the approval of some authorized examining board, or the possession of a Degree given by a recognized training organization, etc. A plan now under consideration in the United States, for example, would require eight distinct conditions for qualification of competence.
- (ii) *Competence for What Job*. This factor is complementary to and equal in importance to (i). It requires that boundaries be set and recognized for the content of the practical work to be undertaken, just as (i) requires that there be qualifying limits for persons who are to do the practical work in question. Formal qualifications of certifiable workers under (i) are a technical matter upon which psychologists through their Association can and should pronounce. But the content of the job for which there is a recognized demand sufficient to warrant a scheme of certification is a matter that must be clear alike to psychologists *and* to others outside our group. Here the interest of psychologists is only part of the issue. The major point at issue is whether there exist or can be created outside constituencies of interest which agree that certain jobs of work pertaining to persons can and should be done by those who are technically competent. Without some degree of conscious demand for expert help on the part of those to be served, there is little to be said for anyone trying to create machinery for certifying experts to deal with psychological aspects of human relationships.

The problem of psychologists in regard to the content of their professional work is not that there is no felt need outside, but rather that there are so many and such divergent needs. In recent years various sorts of specialized psychological work have come to be recognized as an integral part of the social experience of many communities and of the nation, and the war emergency greatly

accelerated recognition of the fact that more psychological knowledge and competence is required for this work than common sense or other professions can readily provide. As examples of people who require a background of psychological training, we may cite workers for nursery schools; counsellors in Services or in school systems; clinical assistants working in psychometrics, speech therapy or broader problems of behaviour; specialists on public opinion; personnel workers in industry, etc.

Most psychologists believe it is in the public interest that at least some jobs of this sort should be in the hands of certifiable personnel rather than of untrained persons. But the multiplication of avenues requiring specialists at once increases the complexity of an effective programme of certification. The fields manifestly differ in content and in the training required even though common psychological principles may pertain. The fact is that outside of Universities the term 'applied psychology' has no legal meaning and only vague popular meanings. More precisely then, what fields of work is it suggested that certification should cover in Canada? And would certification of a candidate for one field imply a degree of interchangeability to engage in other fields?

- (iii) The *Basis of Employment* is a further consideration. Three bases may be mentioned which present different issues: (a) Self-employment; (b) Private employment, i.e. as a whole- or part-time paid employee of a voluntary agency or private firm; (c) Public employment, i.e. in a tax-supported public service, whether municipal, provincial, or federal.

Public employment is the setting most easily relateable to certification because it affords more uniform conditions and control, usually with positions graded in terms of duties, qualifications, promotion, pay, etc. Similar conditions and controls may apply also where public grants are given to other bodies to be conditional on the employment of qualified staff. *Private employment* is more difficult to deal with since the quality of employees engaged to do psychological work will depend on the policies or personal views and circumstances of those in charge. There, the option of employers to engage certified staff can be influenced, of course, by social pressure aimed at improving the quality of service rendered by the organization. *Self-employment* is the category in which it is most difficult to set up regulations. This is partly because it makes one person wholly responsible for two functions, viz. professional service and profit-making. These are motives that easily get into conflict unless schooled by self-discipline. Control rests on the ethical standards of the individual worker and this can be reinforced only by legal disciplinary

procedures in cases where the economic motive over-balances regard for the quality of service rendered.

Generally speaking, a certification scheme should make a greater contribution to a community if framed to meet the positive needs of its public services rather than if designed primarily to curb possible abuses that may occasionally arise under self-employment.

- (iv) *Limits for Certification* are a fourth factor. Several points concerning scope, permanence and locality here arise. (a) Regarding scope, the question whether certification should qualify to engage in any of several fields of application, or only in a specified area, has been discussed in (ii). The fields already are too diverse in character for the all-or-nothing principle to be simply applied. In addition, even for a particular field, certification may sometimes with advantage be handled in a progressive manner, to be achieved through successive levels or grades, rather than being announced as complete initially. Thus, elementary, intermediate and permanent certificates, with their appropriate conditions, are well-known in public services. (b) The duration of a certificate either may be for life (granting good conduct), or for some limited period, as for instance, teaching certificates that require periodic evidence of successful experience, or again, our annual license for motor-driving. In general, this element of duration implies definition of conditions under which a certificate may be revoked, suspended, or renewed. (c) Territorial limitations must also be provided for, whether in provincial or federal terms, with the possibility of reciprocity between different jurisdictions within or beyond Canadian boundaries.
- (v) Lastly, the *Sanction for Certification* is perhaps the most important factor in our problem. In essence this amounts to the fact that only some legally constituted public authority can certificate for practice. This power cannot be assumed by any training organization or scientific body or professional association as such. It can be exercised only by a neutral body which stands between such a special group and the public to be served, thereby representing the whole community. In short certification must be by some proper governmental authority, either provincial or federal or both. As members of the C.P.A., we are a special group asking for permissive (or restraining) action respecting technical activities which certain individuals may (or may not) engage in for pay. Such regulation of personal services can be sanctioned only by a branch of government with jurisdiction over such matters for the territory in question. If a C.P.A. Board of Certification is to function in this connection, its action must be on behalf of the Government which gives its sanction. This relationship has yet

to be established by our Association; it is not established merely by insertion of an article or by-law in our constitution looking in that direction.

To sum up these general factors about certification, the above points boil down to what our Association's share should be in a three-party agreement. First, there is the Public (or some part of it) which must wish certain psychological services to be performed. Second, our Association must be in a position to give assurance that some persons are technically competent to render these services. Third, the Government (of a Province or of the Dominion) must officially sanction ways and means for the satisfactory performance of these services with safeguards for their effective application in practice.

WAYS AND MEANS

Several ways of approaching the problem of certification have been tried, some proving easier or more adaptable to given circumstances than others. I shall refer to four ways which are not necessarily alternatives, mentioning them in what seems to be the order of difficulty in putting them into effect.

- (a) *To license persons.* This has both a permissive and prohibitive side. It amounts to naming those who may perform and also maintaining that all not so named may not perform (without penalty). Because of its personal emphasis and prohibitions this plan is the most discriminating and most drastic to enact.
- (b) *To legalize a term* (e.g. 'Certified Psychologist'). On this basis anyone may do what he likes, but unless he has qualified for this title under the Act he cannot make use of the title or enjoy the privileges belonging thereto (without penalty). Statutory recognition of a title is obviously a less prohibitive and drastic procedure than licensing, although it similarly presumes public understanding and acceptance of what the field of work may be. For psychologists, either plan (a) or (b) would mean creating a new profession or specialty to have a place in the social pattern.
- (c) *Sub-specialization.* This third way is to create a sub-specialty within an established specialty or profession. Thus, within the category of commissioned officers the Army may create personnel counsellors, or within the ranks of medical practitioners that profession can provide for sundry specialists; among its qualified teachers a school system may certificate guidance workers; within the profession of social work there may be psychiatric social workers, etc.

This approach to certification has certain definite characteristics. First, there is always a parent specialty already certified. Second, additional training, experience and special qualifications will be required for admission under the narrower specialty. Third, the latter specialized work may be very largely psychological in character, only moderately so, or not psychological in any technical sense. Fourth, whether the content in practice be mainly psychological or not, the descriptive title used for workers in the sub-specialty will be one derived from or related to the parent specialty. In other words these specialists will not be known as 'psychologists', notwithstanding the character of their job and preparation.

Here my colleagues may object that this plan has no significance for Psychology or for the C.P.A., because Psychology isn't a profession. I submit, however that sub-specialization as here described is very important to the C.P.A., provided the work in question is largely psychological and utilizes the methods and techniques of our science. It is important for two reasons. First, because the quality of public service in sub-specialties which use our procedures will be dependent on the quality of psychological training that is given their workers, and on the background of psychological research that is continually being cultivated to strengthen and improve the service in question. Second, workers in one sub-specialty may in due course transfer to work in other settings and may there claim to be psychologically competent, though then without the support and oversight of any parent body or profession. What organization, other than the C.P.A., could be in a position to help appraise claims of competence in such cases, if the public interest is to be well served?

- (d) *Training for Employment.* This fourth plan would endeavour as a first step to agree on the sort of psychological training programme that would be most suitable to qualify for particular employment. Far from being too remote from the goal at issue, this approach may mean everything for the eventual success of certification through the C.P.A. When one begins from the side of training, namely, to make a comparative critique of existing training programmes that profess to prepare for psychological employment, responsibility is then placed on the local training organization, whether it be a private corporation, a state University or a Government Department (Education, Health, Defence, etc.). The C.P.A. is not itself a teaching organization, but its affirmed purpose is to promote practical applications of psychology through teaching, discussion and research. As a national body with local representatives who are responsible for teaching psychology, the Association is in a unique position to investigate and promote

standards in the quality and content of all relevant instruction. It is, indeed, our only medium for equating proficiency in one applied field and another, or one province and another, or one University and another.

Many of us who teach at the upper levels may not be too clear about what really are the objectives of the courses we give in psychology, or of the entire instructional programmes taken by our students, either on the undergraduate level or even on the postgraduate side. We wish to contribute to a liberal education of future citizens and also to produce capable workers for public service. The surer we are of the soundness of our training for both these ends the more confidently can we approach the complex issues of certification.

To summarize: These four approaches to certification (viz. by licensing, by statutory enactment, by sub-specialization, and by comparative standardization of training) form a hierarchy in terms of the practical difficulties they present in framing a policy of immediate action. In my opinion, our rate of progress towards effective certification will depend on which end of the scale we begin with. I interpret that sometimes the mistake made elsewhere has been to begin by attempting to license before the basis of training for employment (and hence the actual or potential supply of workers) was sufficiently developed and standardized to warrant seeking government action to regulate employment for the fields represented by the trainees.

PRESENT SITUATION

There can be little doubt that in Canada the actual needs for trained psychologists far exceed both the existing supply and the capacity of our training facilities. We are suffering, too, from the dislocations due to reconversion of our members from war activities to those of peace-time. The situation thus presents us with responsibilities as regards both supply and demand. The Weir Report on Rehabilitation, 1943, stated that 150 psychologists were needed in Ontario and an estimated 450 in Canada, though without detailing what tasks they were required for.

Whatever the proper forecast may now be of scientifically trained workers required for our field, it can safely be said that the present rate of production of trained psychologists should, if possible, be greatly increased. Meanwhile the demand in public services as well as in private organizations is stimulating the employment as psychological workers of persons who are either untrained or who were only partially trained in the Services. Our leaders in Universities are still being called on (beyond their regular duties) to advise and assist governmental departments in regard to matters of organization and supervision for the psychological sides of various services. This is essential, though it should be more stably organized (i.e. on a central

basis), and I trust that in the meantime University members of the C.P.A. and other members who are able will continue to respond to these national needs in the same spirit that they showed toward the country's needs in war-time.

On the training side the situation is rendered critical in our Universities by the multitude of students (ex-service as well as non-service) and the dearth of qualified staff. During war years our national services had with them sufficient psychologists with teaching experience to do their own training for psychological specialties, but now these services are leaning heavily on our Universities to conduct special training for them. This interim condition should presently give place to a sound form of regular training in psychology which might more nearly meet the practical needs of our country.

It is for the C.P.A. to consider whether our present training programmes are adequate or should be revised, and in what directions. This is more than a local problem for each University's Department of Psychology to consider. It is a national problem that requires co-ordination, and is one of first importance for the C.P.A. and for its future plans regarding certification. So far as I know there are only two Canadian Universities which offer a diploma course on some aspect of Applied Psychology, viz. McMaster, offering a Diploma in Vocational Guidance on an undergraduate basis, and Toronto, giving a Diploma in Child Study on a graduate basis. The post-graduate programmes for higher degrees in our Universities may not fully serve the purpose of supplying the required quality and number of professionally trained personnel without sacrificing other aims that are also important in research and higher education. Appropriate adaptation within our graduate training may therefore be indicated.

DEVELOPMENTS ABROAD

In the United States, applied psychology has made the most progress, and forms of organization have been evolved by the A.P.A. to implement this movement. Their Association has long had a standing committee on professional training for psychologists. Also, about two decades ago the A.P.A., in response to the appeal of some members, undertook to issue certificates within the membership of its Division of Consulting Psychologists. Ensuing difficulties found to be inherent in this plan (particularly regarding responsibility in dealing with instances of unprofessional conduct) led soon to its abandonment (*Psy. Bull.* p. 131, 1928). But the problem remained and was probably one reason for the later formation of a separate organization, the American Association of Applied Psychologists. Under the stimulus of the recent war a re-organization happily has been effected, recombining these large Associations with renewed efforts to promote psychology and its practical applications. At present two plans touching

certification are being developed in conjunction. A statute defining who is a Certified Psychologist has been passed in Connecticut (and this procedure is being followed by certain other States) with the necessary local means for its administration. At the same time the A.P.A. as a national organization is in process of establishing regional Boards of Examiners for applicants whom the Association at large can assess, this being intended to supplement the statutory procedure enacted by particular States. These suggestive measures have not yet proceeded far enough to judge of their relevance for Canada, but we shall observe their progress with interest.

Our colleagues in Great Britain have the genius of getting their ends accomplished without much mechanism in the way of formal organization. There, a main procedure has been to infiltrate highly qualified psychologists (of both sexes) into key positions in public services and private organizations. In this, the British Psychological Society has been relatively inactive, as compared with methods of direct liaison. Effective contacts are being made for work on a post-war basis in the fields of Education, Health, Industry, Defence and Government. On the side of training for the production of psychological personnel, Universities in the United Kingdom have long emphasized the basic principles of our subject rather than its general applications, but now special provision for the latter is being made at numerous centres. Thus the Cambridge Psychological Laboratory recently established a division for Industrial Psychology, of which the late Professor Craik was director, and the National Institute of Industrial Psychology which has done pioneer work and training in that field since the previous war, may probably shortly be given formal relation with the University of London to the advantage of all concerned. I venture to think that in every setting emphasis will remain on the thoroughness of the training to be offered rather than on the numbers to be produced.

SUGGESTIONS FOR THE C.P.A.

In conclusion I would make three suggestions to our Association, growing out of the changes made in the Constitution last year.

The first is that By-law I should stand in the sense of requiring that a body be constituted to deal with problems relating to certification. This body might well function as a Standing Committee on certification rather than as a Board of Certification.

The second suggestion is that this Committee should concentrate its efforts initially on item (a) of the By-law, viz., the establishing of standards for certification. Their programme might include two lines of study as a start. (i) A job analysis of the duties now performed by employed psychologists and by specialists whose work involves the use of psychological techniques, together with a forecast of the probable number of such workers required for a short-term period of say the next three years.

(ii) A study of the content of instruction in psychology now given in graduating courses in Canadian Universities and also of that given for post-graduate degrees in our subject. This would be with a view to recommending the minimum of experience and of training (didactic and practical) which should be required for employment on particular kinds of applied work that are in demand.

A third point for this Committee to look into would also relate to fields of professional practice and more especially to the ethical standards our Association desires to maintain therein. I therefore suggest that the Committee undertake the preparation of a Code of Practice which members of the C.P.A. should keep in mind when sponsoring new members or applicants to engage in applied fields. Not being a profession we have at present no guiding statement on rules of conduct, such as the Oath of Hippocrates, for the information and counsel of our students, internes and graduates. They are to work with human material and we must help them to realize beforehand all the responsibilities this entails.

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PSYCHOLOGY AND THE CANADIAN SOCIAL SCIENCE RESEARCH COUNCIL

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FOR the past four years I have represented psychology on the Canadian Social Science Research Council, an agency formed in 1940 to promote and co-ordinate Canadian research in the social sciences. On the expiration of my term in December, 1946, I shall be succeeded by Dr. R. B. Liddy of the University of Western Ontario. It has been a most valuable experience to meet twice a year with representatives of sister disciplines from every part of Canada, and my enjoyment of the Council sessions has been lessened by only one thing—the fact that applications for aid in psychological research have been almost totally lacking during the four years. Professor J. A. Irving is doing a socio-psychological study of the Social Credit movement for inclusion in a forthcoming Council publication, and one or two applications have been refused as falling outside the Council's field of interest or for technical reasons. But otherwise psychologists, though directly represented on the Council, have brought forward no research projects for its consideration and support.

For this there are obvious reasons: there has never been much research in social psychology in Canada, and during the war staffs were so depleted that research was almost entirely confined to military fields. In addition, many psychologists are probably unaware of the advantages which the Council offers, a fact for which I must accept most of the blame, and which this article may do something to remedy. My work in Ottawa kept me out of touch with the universities and away from psychological conferences during most of my tenure of office.

The Council has now completed its fifth year, and a full account of its activities will be found in the Annual Report, obtainable from the Secretary-Treasurer, 155 Marlborough Avenue, Ottawa. The Canadian Psychological Association was one of the four bodies which sponsored the formation of the Council, the others being the Canadian Historical Association, the Canadian Political Science Association and the Canadian Committee of the International Geographical Union. Membership of the Council consists of one representative from each of the sponsoring bodies, not more than eight members-at-large (selected so as to fill out the representation, regionally and by subjects) and four associate members representing governmental agencies (Dominion or Provincial bureaus of statistics, archives, museums, etc.).

The expenses of setting up and operating the Council were met by a four-year grant from the Carnegie Corporation of New York, and its

activities in aiding research projects have been financed since 1942 by grants of \$10,000 a year from the Rockefeller Foundation. During the five years just ended this money has been used mainly for two purposes: assisting in the publication of meritorious manuscripts which would otherwise have remained unpublished or been long delayed, and aiding in the completion of promising studies by individuals which had been brought to a halt for various reasons. In addition the Council has embarked on two major projects, one on the Canadian Northland, to be published in completed form during 1946, and one, now nearing completion, on the background and history of the Social Credit movement in Alberta. Each of these consists of a group of studies by competent scholars interested in one or another aspect of the subject; funds for travel, field work and publication were covered by special grants from the Rockefeller Foundation.

During its second five years the Council's work will probably expand considerably, and it is obviously desirable that the participation of psychology should no longer be merely nominal. I am sure that I speak for my fellow-members of Council in saying that their willingness to support psychological research will be limited only by the Council's budget and by the suitability and value of the projects submitted. Psychologists, however, are faced by one problem which does not apply to the other disciplines represented: the fact that ours is only in part a social science. Difficult as it is to distinguish between social researches and those that are not social, it is fairly clear that such work as laboratory studies of perception and animal learning, or statistical analyses of general intelligence and test items, should seek support elsewhere.

As regards the wide range of psychological studies in which social factors play some part, the Council has laid down no criteria of acceptability; each project will be judged on its merits and on the calibre of the scholar presenting it. But on the basis of my experience in the Council I would suggest that the social *significance* of the study, i.e. its relevance to some real social problem (and particularly to a Canadian problem) will be more important than the mere fact that it deals with social behaviour. For example, I would not expect an elaborate study of the social contacts of two-year-olds or of the linguistic deficiencies of psychotics to be viewed as favourably as would a study of shifts in Canadian public opinion, changes in the etiology of crime during the war, or attitudes within and towards a minority group. None the less, any well-considered project submitted by a competent psychologist will always be certain of sympathetic consideration.

A second point is that the Council is less interested in findings than in people, less interested in supporting studies for their own sake than in helping qualified scholars to undertake or complete work which they want to do in their own chosen fields. For this reason most grants so far have

been given to relatively mature specialists of proven ability. Doctoral theses, unless of unusual importance and value, are unlikely to receive much consideration except possibly as part of a co-ordinated series of studies. For the same reason the Council does not proceed in its larger investigations by making a cut-and-dried plan and "farming out" topics to those who will take them; the effort is rather to discover persons who already have an interest in some phase of the problem and allow them to handle it in their own way with a minimum of direction. It is a slower method, but one more likely to produce good scholarship.

In line with this policy the Council has recently indicated three important fields of study in which it is hoped that co-ordinated studies may be undertaken during the next five years. In all of these there is room for relevant contributions by psychologists. The first is a large-scale study of the social and economic adjustments of the Canadian Indian. This is a long-range project of great public importance; a few preliminary studies of Indian administration and education are already under way. While the bulk of the studies will probably be economic, sociological or anthropological, psychologists could make very valuable contributions, e.g. on Indian intelligence and educability, on the extent and character of anti-Indian prejudice, on child-rearing practices, and on the attitudes fostered by reservation life and governmental dependence. A second project is for a more complete study than has yet been made of the criminal statistics collected at the Dominion Bureau of Statistics. This might develop into a wider study of crime and penal treatment in Canada, in which there would be wide scope for psychological research. Finally, there is envisaged the first thorough, scientific attack on the complex problems of French-English relations in Canada, using all the resources available to the various social sciences. This project, which is long overdue and of obvious significance, is still in its formative stages, but it is not too early to call it to the attention of those who might ultimately contribute to it. It should be helpful to young scholars to know that in these three fields, at least, a good piece of original investigation, if sponsored by the Council, will receive the necessary financial support and be assured of publication.

PSYCHOLOGICAL ASPECTS OF THE SOCIAL CREDIT MOVEMENT IN ALBERTA

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PART I. THE DEVELOPMENT OF THE MOVEMENT

THE investigation of the Social Credit movement in Alberta is essentially a cooperative enterprise to which the historian, the economist, the political scientist, and the sociologist can all make important contributions. But its distinctive characteristics as a *social movement* can be best understood in terms of social psychology. For psychological explanations, as Rivers realized long ago, must finally be given for all social phenomena.¹ In addition to its interest for the social scientist, a psychological interpretation of the Social Credit movement is uniquely valuable to the social philosopher; it is doubtful if any other social movement illustrates so completely the various conditions under which a social philosophy may become an instrument for the achievement of political power.

An analysis of the response of the people of Alberta to the appeal of the Social Credit philosophy, and a psychological interpretation of the remarkable social movement which emerged as a result of that response, will be offered in subsequent papers. Before such an analysis and interpretation can be undertaken, however, the social psychologist must have available certain essential data, which the present paper attempts to supply, concerning the underlying philosophy, the leadership, and the development of the Social Credit movement during the years 1932-35.

I

Social movements tend to appear during periods of social disintegration when profound dissatisfaction with the existing order has already arisen.² The proposals for social reconstruction which inevitably arise during such periods are ultimately based upon a constellation of ideas or a "philosophy" which usually appears in both written and spoken forms. The followers of such a philosophy obtain a double satisfaction psychologically: they receive from it both an interpretation of the social collapse and a programme for a new social order.

The philosophy of Social Credit includes both a monetary theory which "explains" the inner workings of the capitalistic financial system and an ethical-political theory which interprets the rôle of the individual

¹Rivers, W. H. R., *Psychology and Ethnology* (London, Kegan Paul, 1926), 3-20.

²Clark, S. D., *The Social Development of Canada* (Toronto, 1942). The present writer is deeply indebted to Professor Clark for many valuable discussions of the sociological significance of the Social Credit movement.

in the democratic state. The appeal of the Social Credit ideas will be misunderstood unless one realizes clearly that this philosophy has made its way not merely by the materialism of its proposals for the reconstruction of capitalism but also by the idealism of its interpretation of the rights of man.³

Social Credit owes its origin to an English engineer, Major C. H. Douglas, long the representative of the Westinghouse interests in the East, where he had many conversations on engineering and financial problems with J. C. E. Bronsen, then Comptroller-General of India. Douglas was impressed by the fact that many developments, *physically* possible from the engineer's point of view, were *financially* impossible. Later, in England, as Assistant Director of the Royal Aircraft works during the First World War, his comprehensive studies of cost accounting led him to the conclusion that, in over 100 industrial establishments, the weekly sum total of wages and salaries was continually less than the weekly collective price of the goods produced. It was upon this conclusion that he formulated his now famous "A + B Theorem" which became the key conception of his economic theories⁴ and also provided him and his followers with one of their principal slogans, "Poverty in the Midst of Plenty," a paradox which obviously has very great propaganda value in periods of economic depression.

On its negative or critical side Social Credit maintains that a permanent deficiency of purchasing power is inherent in the capitalistic financial system in the Machine Age; on its positive or constructive side it seeks to solve the problem of distributing the abundance of goods produced, as well as to increase production. It is maintained that other proposals for social reconstruction suffer from three fallacies: that there is a limit to production; that work is the only just prior condition of individual income; and that there is magic in state ownership. Further, other reformers have not realized the significance of the distinction between Financial Credit, which is based upon gold, and Real Credit, which is based upon such factors as raw materials, power and labour.⁵ Under the existing

³The literature of Social Credit is voluminous. The following three books were widely read in Alberta: Douglas, C. H., *Social Credit* (London, Eyre & Spottiswoode, 1924); Colbourne, Maurice D., *Unemployment or War* (New York, Coward-McCann, 1928); Hattersley, C. Marshall, *This Age of Plenty* (London, Pitman, 1926). There is a lengthy bibliography in Hattersley's book.

⁴In the A + B theorem, A = the flow of purchasing power to the masses (as represented by wages, salaries, and dividends), and B = bank charges, overhead costs, taxes, and the cost of raw materials. If A + B represents the cost of production under the financial system, the rate of flow of purchasing power to the masses will be less than the rate of flow of prices in the same period of time. There will thus be a discrepancy, which Douglas maintains must be permanent, between A (the purchasing power of consumers) and A + B (the total cost of production). Those who accept the Social Credit ideology maintain that this theorem has never been refuted.

⁵Douglas, C. H., *Credit Power and Democracy* (London, Palmer, 1921), VI.

system Financial Credit has fallen into the control of bankers who, through its manipulation, exploit the community for purposes of private profit. A functional financial system should be concerned with the issue of credit to the consumer up to the limit of the productive capacity of the producer, so that both the consumer's real demands may be satisfied and the productive capacity of the capitalistic system may be utilized and developed to the fullest extent.

According to Social Credit, if the capitalistic system is to work successfully, the state must make at least three fundamental changes: it must recover its control over the monetary system; it must issue social credit in the form of a *National Dividend* (based upon a survey of the real wealth of the nation) to every person; and, to prevent the possibility of inflation, it must establish a *Just Price* for all goods. The Social Credit economic and political concepts are obviously capable of diverse interpretations and, in the Canadian Confederation, the constitutional question of their provincial application would immediately arise.

As an ethical and political theory, Social Credit is presented as a "Way of Life": human nature is essentially good, and the individual, as the most important fact of society, is an end in himself, not a means to an end. Personal freedom is the most precious possession of life, and every individual should therefore have political freedom. But he is also entitled to economic security. The state exists solely to promote the individual's welfare, freedom and security. The Social Credit Way of Life is compatible with both Christianity and Democracy, but is opposed to Socialism and Communism, for these would strip the individual of his political freedom. Of all the contemporary ideologies, it is maintained that Social Credit alone provides the individual with both economic security and political freedom.

Social Credit, however, is extremely critical of the existing forms of political democracy. It is asserted that there exists to-day only constitutional democracy, not functioning democracy. Parliament should be under the direct and continuous control of the electors; in actual practice, the party machine controls the people's representatives. In place of the present limited system of State dictatorship, Social Credit proposes to restore sovereign authority to the people. To this end, the electors must be organized in a union through which the individual can directly express his aims and desires to his representatives in parliament.⁶

Also, the present system of democracy has led to the development of economic slaves. Why? Because money has become the master rather

⁶The informed reader will notice a curious resemblance between the Social Credit criticism of political parties and that offered by the Guild Socialists. The similarity is undoubtedly due to the early association of A. R. Orage, the brilliant editor and publicist of Douglas' ideas, with the Guild Socialist movement. See Orage, A. R., "An Editor's Progress", *Commonweal*, III, 402-405, February 17, 1926. The Social Credit criticisms are also reminiscent of passages in Rousseau, St. Simon, and Fourier.

than the servant of man. The people, as the sovereign authority, have lost their control over the monetary system; their sovereign authority has been usurped by bankers who have set up a financial dictatorship, and who use their control of credit to render ineffectual the voting power of the people. The economic system no longer fulfills its moral purpose. For instead of economic security and freedom from want, the individual is faced with "poverty in the midst of plenty", misery and unhappiness.

Social Credit demands that the evils in the political and economic system be remedied by supplying the people with credit based upon the potential goods and services of society. This is the people's right, their *Cultural Heritage*. Only in this way will the individual be freed from wage slavery, be able to choose the work he likes best and claim not only more of those goods which are rightfully his but also more leisure time. The financial system must be reformed, therefore, in order that the individual may achieve the fullest measure of Self-Realization. These ethical considerations make it clear that Social Credit, which is generally construed purely as a monetary theory, is essentially a moral and political philosophy.

II

It is impossible to think of the Social Credit movement in Alberta without thinking of its leader, William Aberhart. Born at Egmondville, Ontario, in 1878, he was educated at the Seaforth Collegiate Institute, the Hamilton Normal School, the Chatham Business College, and Queen's University, from which he obtained extra-murally the degree of B.A. After teaching in Ontario for several years, he settled in Calgary in 1910. Five years later he became principal of the Calgary Crescent Heights High School, one of the largest and best organized institutions in Western Canada. In addition to his heavy administrative duties, Aberhart was an efficient and successful mathematics teacher, transplanting to the West the nineteenth-century techniques of instruction he had acquired in Ontario. As one of Alberta's leading educators for a quarter of a century, he easily transferred his prestige and influence to the fields of religion and politics. Throughout his life, in relation to his followers, he exhibited to a high degree the two characteristics of successful leaders: he had "membership character" in whatever group he led; and he represented "a region of high potential in the social field."⁷

William Aberhart first became prominent in Alberta, outside educational circles, as a religious leader. In his youth, inspired by Dr. Nicol's Bible Class in Zion Presbyterian Church, Brantford, he had wanted to be a Presbyterian minister; almost as soon as he arrived in Calgary, he followed Dr. Nicol's example and began teaching a large Bible class, at first in Presbyterian or Methodist churches, later in the Westbourne Baptist

⁷Katz, D. and Schanck, R. L., *Social Psychology* (New York, Wiley, 1938), 187-189.

Church. His following eventually became so large that he organized the Calgary Prophetic Bible Conference which met first in the Grand Theatre, then in the larger Palace Theatre. Here, in the nineteen-twenties, Aberhart was accustomed on Sunday afternoons to give two-hour interpretations of Christian 'fundamentalism and Bible Prophecy to audiences that numbered 2,200. He was one of the earliest to see the possibilities of radio. About 1924 he began to broadcast his Sunday services over CFCN, known as "The Voice of the Prairies", and, until recent years, the most powerful radio station in Canada. In addition to his Bible Conference, he organized a morning Radio Sunday School which continued to function throughout the worst years of the depression. Through his use of radio, Aberhart built up a personal following that, according to certain estimates, numbered between two and three hundred thousand persons. In 1927 his Sunday services were put on a permanent basis when he and his followers constructed in the heart of Calgary, at a cost of \$65,000, the very large Prophetic Bible Institute, which thenceforth became the centre of all his religious activities.

Aberhart's evangelistic and prophetic doctrines had a tremendous appeal in Alberta. His presence and his voice also contributed to inspire in his followers a fanatical and mysterious zeal, for he spoke "as one having authority". His resolute and inflexible will combined with his doctrines and his strong personal attraction to give him a power over his followers which verged on dictatorship. He was infinitely resourceful, and once his mind was made up no obstacles could turn him aside from his self-appointed task. Aware of his ability to hypnotize people by his presence and his voice, he used this ability throughout his political career. He was fully cognizant also of the emotional attitudes which had developed among the people of Alberta during the early years of the great depression. There can be no doubt that he appealed directly to the emotions of these people, for he realized clearly that "an emotional attitude when once aroused tends to radiate over all concurrent conscious processes";⁸ but it would be unfair to deny that he sought to educate the people of Alberta as well. He had an uncanny knowledge of the art of making up people's minds for them; he led people to believe "that he alone could think constructively; that he had the finer feelings; that his was the responsibility of decision and others had only the right and obligation of acceptance."⁹ But, through it all, Aberhart gave the impression of utter sincerity and that sincerity seemed to enter the very souls of his followers.

One summer night in Edmonton, in 1932, this remarkable man, amidst circumstances that are almost legendary, began to read the exposition of Social Credit contained in Maurice Colbourne's *Unemployment or War*.

⁸Young, Kimball, *Source Book for Social Psychology* (New York, Crofts, 1935), 789.

⁹Bartlett, F. C., *Political Propaganda* (Cambridge, 1940), 9.

Many hours later, as the hot July sun rose over the prairies, Aberhart laid down the book and decided that Social Credit was exactly what Albertans needed to redeem their province from the depths into which the politicians and bankers had plunged it. And he would be their saviour.

III

Social Credit literature was already well-known in Alberta in 1932, having first been introduced (as far as can be discovered) about 1920 by W. Norman Smith, the very intelligent and thoughtful editor of the official magazine of the United Farmers of Alberta. Under Smith's tutelage, the leading U F A members in both the provincial and federal houses had become familiar with the principal doctrines of Social Credit; for twelve years its monetary theories had been much discussed in Alberta as well as at Ottawa. In addition, certain intellectuals in Calgary, who had formed the Open Mind Club, were vigorously engaged, under the leadership of Larkham Collins, in discussing the theory at the very period when Aberhart became a convert. But the interest of these groups was always cautious and academic. With Aberhart as leader, the propagation of Social Credit philosophy in Alberta shortly became a crusade.

No conditions could have been more favourable for the spread of Social Credit ideas than those which existed in Alberta in the autumn of 1932. The farmers of Alberta had experienced every possible agricultural ordeal: they had been made the playthings of the high tariff manipulators; they had built up markets in the United States only to have them ruthlessly cut off; they had suffered drought and every agricultural pestilence from root-rot to grasshoppers; they had seen prices drop to incredibly low levels and they had not been able to sell their products even at these levels. Under such circumstances, a very large percentage of the farms of Alberta had been heavily mortgaged. The utterly discouraged farmers, looking for some tangible cause for all their miseries, focussed their resentment and hate upon the banks and loan companies. In the cities, towns and villages the masses of the people were no better off. Unemployment was wide-spread: thousands of people were living on relief; still other thousands lacked the elementary provision of food, clothing and shelter. Psychologically, hundreds of thousands of people experienced a profound personality disintegration: they were caught in a steel web from which there was no escape; their social environment, their feeling for the process of life, their hope for the future, all became meaningless. It was into such an environment that the dynamic Calgary school principal and religious leader now proceeded to pour the symbols of Social Credit.

Aberhart, whose educational and religious activities had long made him familiar with the techniques of organization, set about his new task in a thoroughly systematic manner. In the autumn of 1932, like a good

school teacher, he prepared a series of mimeographed lessons on Social Credit which he used as the basis of discussion for a study group he organized in his Bible Institute. Gradually, and with cautious reservations, he began to introduce Social Credit ideas into his religious broadcasts. As these efforts on behalf of Social Credit were at first entirely educational, and not at all political, he received many invitations to lecture on Social Credit to various Calgary groups and organizations. In this way, he also visited many U F A locals in the rural constituencies surrounding the city. While on vacation during the summer of 1933 he left the work in the hands of several ardent followers whom he had instructed during the winter. By the autumn of 1933 hundreds of people were coming to the Institute to discuss Social Credit and new techniques of organization had to be developed. Aberhart and his followers now conceived the idea of a *systematic* propagation of Social Credit theories throughout the entire city of Calgary and the adjoining rural areas. On the first four nights of each week, they campaigned tirelessly in school auditoriums, class rooms, small halls, private houses; on Friday nights the eager workers gathered at the Institute, always overcrowded, to hear the Leader himself.

The natural outcome of all this activity was the formation of local study groups in Calgary, in the towns and villages nearby, and ultimately throughout the whole of Alberta. During the winter of 1933-34, the movement surged like a tidal wave from the south to the centre to the north of the province, until finally it seemed as if everyone in Alberta was studying and discussing Social Credit. During this period, Aberhart published a number of leaflets and pamphlets¹⁰ which were used as the basis of discussion in hundreds of Social Credit study groups.

The enthusiasm for Social Credit penetrated to the rank and file of the U F A organization itself. At their annual convention in January, 1934, the United Farmers hotly debated the possibility of forcing their government in Edmonton to introduce Social Credit legislation immediately. But there was grave dissension within the U F A organization owing to the presence in its ranks of many supporters of the Cooperative Commonwealth Federation which had been founded in Calgary in 1932. However, the public clamour over Social Credit finally became so great that in March, 1934, the U F A government was compelled, very much against its will, to invite William Aberhart and others to give evidence on the possibility of introducing Social Credit legislation in Alberta, before the Agricultural Committee of the Legislature. At one of the hearings of this Committee Aberhart described the development of the Social Credit movement:

¹⁰These pamphlets are, for the most part, summaries of the doctrines of Social Credit. Aberhart displayed great pedagogical acumen in the preparation of these outlines, the most important of which is entitled "The Douglas System of Economics—Credit Power for Democracy".

Thousands and tens of thousands have signed their names to petitions urging for a full and complete investigation of Social Credit as a remedy for the depression. Others are ready to sign. The representatives from Calgary have 12,000 signatures placed in their hands. Many U F A locals as well as various clubs and Social Credit groups have told us that they were forwarding resolutions to the representatives of this house.¹¹

A climax was reached during this legislative investigation when Major Douglas himself came to Alberta, addressed a vast and memorable meeting in Calgary, and expounded Social Credit at length before the Agricultural Committee.

The arrival of Douglas also focussed sharply a fierce controversy that had been raging for several months within the inner circle of the Calgary leaders of the Social Credit movement. Many of the members of the New Age Club, the most intellectual and aggressive of all the Social Credit study groups in Alberta, had long contended that Aberhart did not understand the elementary principles of the new philosophy and that, in any case, Social Credit could not be applied in the provincial sphere under the existing Canadian constitution. In February, 1934, discouraged by his relentless critics, Aberhart had relinquished to the chief philosopher of the New Age Club, Gilbert McGregor, the Presidency of the Alberta Social Credit League, into which the study groups throughout the province had been loosely organized. There now occurred a familiar social phenomenon in the bitter struggle for control of the movement that developed between the members of the New Age Club and those who remained loyal to Aberhart. In the early spring of 1934, the future of Social Credit in Alberta was dramatized, with its supporters everywhere asking the question, "Who will bring the idea to power?"

This bitter struggle for control gave both the faltering U F A government and the optimistic Liberals (who felt confident of winning the forthcoming provincial election) new hope for the future—the hope that the Social Credit movement would break up and leave the field clear for an old-fashioned election. But the U F A and Liberal leaders were completely lacking in social awareness, for they failed to realize that an overwhelming social movement was sweeping Alberta. Even the elaborate and damaging publicity that the hostile newspapers of the financial interests naturally gave to the conflict within the Social Crediters' inner circle merely increased the momentum of the Social Credit movement.

Nor was it long before the dramatic question as to who would bring the idea to power was resolved. For, after two months as President of the Social Credit League, Gilbert McGregor realized that he could accomplish little without the remarkable propaganda facilities of the Bible Institute and the large, enthusiastic, personal following of William Aberhart. In April, 1934, quite apart from the activities of the warring cliques in Calgary,

¹¹ *Report of the Evidence taken by the Agricultural Committee on the Douglas System of Social Credit, Session 1934* (Edmonton, 1934), 11.

public enthusiasm forced Aberhart's return as Leader of the Social Credit movement. At a stormy meeting in the Bible Institute, McGregor resigned both the Presidency of, and his membership in, the Alberta Social Credit League. He and most of the New Age Club members then joined an opposing organization known as the Douglas Credit League which, among many other enterprises, had its own newspaper, the *Douglas Social Credit Advocate*. Thereafter, two Social Credit Leagues existed in Alberta: McGregor and his associates continued to study and advocate the adoption of Social Credit principles on a national scale; Aberhart and his followers intensified their drive to bring the idea to power in Alberta immediately, with the hope that Social Credit would then sweep over Canada at large. To the social psychologist it is extremely interesting that, during the long and acrimonious controversies between the leaders of the two groups, the response of the people of Alberta was never in doubt. Aberhart, and Aberhart alone, could rally the masses behind the great idea. And without Aberhart's leadership it was now entirely clear that the idea could not be brought to power.

Early in the summer of 1934 two important moves were made by the hard-pressed U F A administration in Edmonton: the report of the legislative investigation, which was definitely hostile to the Social Credit proposals, was published and widely circulated; and, following a re-organization of the Cabinet, the Premier, John E. Brownlee, and the Minister of Public Works, O. L. McPherson, resigned. (These two men had been involved in law-suits touching their personal conduct. A third member of the U F A Cabinet had long been the subject of much adverse gossip.) In the desperate struggle with Social Credit, the loss of two brilliant and forceful leaders was a severe blow to the U F A organization, more especially as the new Premier, R. G. Reid, although personally above reproach, was by all accounts uninspired and uninspiring.

Amidst the public outcry over the debacle within the U F A Cabinet, Aberhart, greatly vexed by the negative results of the legislative inquiry, returned to the leadership of the Social Credit movement with redoubled vigour. To meet what he considered to be the moral needs of the hour he sent out clarion calls over the radio for "One Hundred Honest Men"; to determine more accurately the extent of Social Credit support he organized a straw vote; and to give additional impetus to the spread of Social Credit philosophy, he established a weekly newspaper, the *Social Credit Chronicle*. Most important of all for the consolidation of the movement, Aberhart and his chief lieutenant Ernest C. Manning—(who had served for several years as the conscientious and hard-working Secretary of the Bible Institute) spent the whole summer of 1934 on a speaking tour which took them into almost every inhabited part of the province. Nor was there any lack of response to the calls for "Honest Men"; scores

of speakers who believed in Social Credit as a gospel of salvation appeared on all sides. During that summer, meetings were held in every city, town, village, and practically every school district of Alberta. Throughout all this intense educational activity, there was still no hint of the formation of a political organization, and Aberhart constantly stated that he had no personal political ambitions.

As the autumn of 1934 ended and impoverished Alberta passed into the sixth grim winter of depression, it became increasingly evident that the decision to transform the Social Credit movement into an active political force could no longer be delayed. The battered U F A government was clinging desperately to the last vestiges of its fourteen years of political power, despite the continual challenge of the Liberal leaders to call the long-deferred election immediately. Of much greater importance for the future was the demand of the masses of the people that a Social Credit political party should be organized at once to contest the election.

But Aberhart was so reluctant to take such an extreme step that he decided to make a final effort to persuade the U F A organization to adopt the Social Credit philosophy as their official platform for the election. To this end, he presented the principles of Social Credit at great length before the annual Convention of the U F A, which met at Calgary in January, 1935. The records of the convention's proceedings suggest that Aberhart was prepared to offer the Social Credit movement as a present to the U F A, provided they would undertake to introduce Social Credit legislation immediately, should they be victorious in the election.

For nine hours Aberhart and the leaders of the U F A engaged in a turbulent discussion of Social Credit. As the stormy debate concluded, Norman F. Priestley, the Vice-President of the Convention, presented to the emotionally overwrought meeting a resolution from the Hilda U F A Local, which had been selected because it was the simplest of the many recommendations in favor of the adoption of Social Credit which had been sent up to the Executive:

Whereas, the present financial system has failed to meet the requirements of modern civilization;

Therefore be it resolved, that a system of Social Credit as outlined by Mr. Wm. Aberhart, of Calgary, be put as a plank in the U. F. A. Provincial platform, to be brought before the electorate at the next provincial election.¹²

The resolution was overwhelmingly defeated. The leaders of the U F A were jubilant for they were now convinced that they had finally disposed of the menace of the Social Credit movement. Aberhart, as he left the Convention with halting steps, gave the appearance of a broken man. He was so exhausted by his long struggle that he failed to realize that the United Farmers of Alberta had that day committed political suicide.

¹²*Minutes of the Annual Convention United Farmers of Alberta, Calgary, January 16, 1935.*

Within a few weeks the renewed demand of the people of Alberta that William Aberhart should become the leader of a new political party could no longer be resisted. The difficult decision to enter politics was finally taken, and the Social Credit party was officially established at an enthusiastic meeting of the Social Credit League in the early spring. Aberhart immediately and without reservations threw his great energies into the winning of the election which the U F A would be forced to hold by August at the very latest.

As the head of the new party in the tumultuous election campaign of 1935, Aberhart exhibited three characteristics of paramount interest to the social psychologist: he displayed an amazing genius for organization;¹³ he had a mass appeal probably unequalled in Canadian history; he exacted and received from thousands of his followers the rare, absolute allegiance that must rank him among the charismatic leaders of mankind.¹⁴ The results of that August election are sufficient evidence of the quality of his leadership; while the U F A won no seats at all, the Liberals 5, and the Conservatives 2, the Social Credit party had 56 of the 63 seats in the new legislature. Scarcely three years after becoming a convert to Social Credit, William Aberhart had carried the idea to political power in his province.

His overwhelming victory can be understood only in terms of an analysis of the psychological appeal of the philosophy of Social Credit to the people of Alberta. Spectacular as was Aberhart's leadership, the most important clue to both the initial and long continued political success of the Social Credit movement lies in the response of the people.

(To be continued)

¹³The function of systematic organization in successful leadership is ably discussed by E. S. Bogardus, *Leaders and Leadership* (New York, Appleton, 1934), 183-191.

¹⁴For a definition of the charismatic leader see Max Weber, *Gemeinschaft und Gesellschaft* (Tübingen, Mohr, 1922), 140. The present writer is indebted to the Hon. E. C. Manning for a description of the attitudes of Aberhart's followers to him. Mr. Manning agrees that Aberhart was definitely a charismatic leader. (Conversation in Edmonton, Office of the Premier of Alberta, September 9, 1946.)

EXPERIENCE WITH EMPLOYMENT TESTS¹

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INTRODUCTION

THE widespread use of tests in industry consequent upon and inspired by their use in the armed services has created new problems and new dangers with which present and potential users of tests should be familiar, if the experience of the mid-twenties is not to be repeated. As an aftermath to the development and wide use of some ability and trade tests during World War I, there was a hasty scramble for easy ways to categorize candidates and to promote and demote employees, with the result that within a few years a potentially valuable tool was abandoned in nearly wholesale fashion. At the present time we are confronted with a similar rush, and are being exposed to the possibility of the same end.

PROBLEMS IN USING TESTS

Tests are new tools to many companies; because of their apparent simplicity they are thought to be easily understood and interpreted, and because of their frequent obvious similarity to academic tasks or dissimilarity from operating situational demands, they are quickly judged as either pertinent or ridiculous.

Any type of test material is an element in a compound; inspection or analysis of the elements that make the compound gives no clue to the fusion that results from a synthesis of the elements; nor does it convey any meaning of the factors, entities, or structures that are sampled or appraised by the elements. That appraisal cannot be made unless the principles out of which the elements were developed are known and the theory on which the fusion rests is clear.

I. The first problem that confronts the user of tests is the formulation of a theory of human activity, and the development of a working concept of the abilities and qualities that make that activity possible. That theory and concept differ from user to user, for it is recognized that psychologists differ among themselves as to the nature of intelligence and personality, and frequently avoid any commitment by the simple declaration that measurements are made of what the tests test. The following hypothesis has been followed for some years as a working principle:

Each person possesses a fund of grey matter that is of a fairly constant quality; this expresses itself with varying degrees of efficiency in different types of situations. Except in very rare cases it could express itself at the same efficiency level in all types of

¹This is a preliminary version of the Introduction to a revision of *Experience with Employment Tests*, The National Industrial Conference Board, New York.

situations but for the influence of drives, objectives, and values, in consequence of which it functions in some areas more efficiently than in others. General ability tests, being of a conglomerate nature, give an indication of the quality of this mental energy; special ability tests indicate the ease or difficulty with which it functions.

II. A second problem that confronts the user of tests is the discrepancy in results from tests with the same label administered to the same person. One test labels a person as normal, another labels the same person as 20% above normal, and a third as but slightly better than a moron, at the same time that the person is an effective worker and a well-adjusted citizen. The discrepancies are due to a number of causes, among which an important one is the population sample on which the norms for the test were established. The disturbances that are consequent upon such hasty labelling are also due to the lack of discrimination and poor judgment on the part of the person who uses an inappropriate test in situations where the test contents and meaning have no relation to the types of problems with which the worker is confronted. The problem is not the use of tests—it is the selection of the most appropriate tests for the peculiar situation.

III. A third problem that confronts any user or victim of test results is the importance or emphasis that will be placed on the results, and the bearing they will have on the resultant judgment placed on the employee. The chief cause of the downfall of testing in the mid-twenties was the prerogative that was assumed by test administrators of labelling candidates with I.Q.'s, and thereafter blessing or damning them in the estimation of anyone who could affect their occupational future and who was influenced by the disclosures from the test. The fact was not appreciated that a test, no matter how reliable or valid it is, gives only an estimate of one phase of a person's possible contribution to life, the totality of which cannot be estimated by any collection of tests. Human nature is a complex compound; the effectiveness of any one element in that compound cannot be appraised by measuring it as a supposed single entity nor interpreted in isolation; it gives one sign of capacity or quality, and is slightly more significant than manner of walking or writing because of well-defined standards with which it can be compared.

IV. A fourth problem lies in the eagerness of test advocates, and the readiness of uncritical management, to install tests because of their popularity and the reported effectiveness of their use. This is illustrated most conspicuously today by the return to the industrial picture of mail-order test packages that promise prompt analysis and effective placement. This would not create the temporary popularity and confidence if it were sponsored by fly-by-night opportunists, but when the tests are poured out in production-line fashion from scientifically labelled institutes with academic-titled sponsors, the number of users can be computed as a definite percentage of the number of mailed advertisements. Management, barraged by tables of data showing the widespread use of the service, and confronted with an

impressive array of graphs and a swollen package of tests with specific and apparently rigid directions for administering, is an easy prey to pressure that is all the more effective because of its apparent scientific basis and its assumed analytical methods.

The answer to the problem can be found if management will ask two questions:

- a. Does the test package protect the company against the type of employee who has previously fallen down on the job?
- b. Does it provide an answer to the manner in which the candidate will meet the intangible demands of the position—working under a particular type of supervisor; planning the day's work carefully, following it scrupulously, and reporting on it honestly; adapting to the old and the young, the subordinate and the superior, the clam and the eel?

It should be recognized that the most appropriate tests for the peculiar demands of a job situation do not provide a complete picture of the promise of candidates; when the tests are selected without any knowledge of the peculiarities of the situation and on the assumption that there are born salesmen, office clerks, or beggars, the resulting generalizations are in the nature of platitudes and about as valuable.

The dangers to which these and other abuses of tests are heir are outlined in the following section.

DANGERS IN THE USE OF TESTS

Tests are clinical and scientific tools; they are to the personnel department what chemical formulæ are to the chemical laboratory. Just as in the chemical laboratory there are technicians and interpreters of data, so in the personnel department there are technicians in the persons of the test administrators and scorers, and interpreters in the persons of trained and experienced psychologists who can integrate the findings from a wide variety of tests and interpret the results, first in terms of principles, and second in terms of the demands of the job situation for which the person is being considered.

The above caution has often been stated by industrial psychologists; it needs repetition today. Too frequently members of personnel departments who could scarcely be labelled as technicians are both administering and interpreting tests, with the usual results—arbitrary judgments, injustices to worthwhile applicants and employees, disturbed morale, and finally the discarding of the tool. The following dangers represent current threats to the best values that can be gained from an intelligent use of tests:

I. *Economic.* No consideration should be given to the installation of a test program unless management is prepared to invest as much money in the development of this set of tools as is spent in the development of a com-

parable set of tools for any other type of work. To do a safe job it is necessary to employ a well-trained industrial psychologist who knows and has had experience in job evaluation procedures, and in translating job demands into human demands; who is discriminating enough to select from these human demands those that can best be appraised by objective measures; and who will spend time experimenting with or developing tools to the point where there is assured proof of their validity. Herein lies a frequently made and costly error; there is too much confidence being placed in Ph.D.'s in psychology. The fact that a person has such a degree and has had teaching experience in a reputable institution or has worked in an office over statistical data is no guarantee that he knows anything about the work and social requirements of the job situation or is capable of translating them into human demands. There is no substitute for industrial experience; the psychologist who has had no experience in establishing wage structures, setting up work standards, and/or negotiating union contracts is sadly handicapped in his ability to interpret work situation demands, and is limited to an analysis of the individual without knowledge of or the opportunity to interpret the work and social situation in which the individual is to be placed. The misjudgments that frequently result from the use of tests are not due to tests; they are due to interpretations of tests made by people who know only one side of a picture. If academic psychologists are to assist in establishing a test selection program they should at least have had experience in setting up a job evaluation and wage structure program, and they will be immeasurably strengthened if they have had experience in time study work.

II. *Training.* A more serious danger is the failure to distinguish between the administration and the interpretation of tests. Personnel clerks are frequently entrusted with both tasks: they can be trained to care for the former, but that is only the technician's part of the test program. A more significant and important part of the program is the interpretation of the test results: that can very rarely be done by a technician in any situation. It is true that after a capable personnel clerk has worked with an industrial psychologist in the development of a test program he can be trained to interpret the results derived from knowledge and skill tests, but he cannot be trained to interpret the results from interest and personality tests unless he has acquired, through academic training and experience:

- a. A sound set of psychological principles that guide his interpretations and estimates of human factors.
- b. A sound knowledge of the significance of statistical variations and the capacity to interpret them in terms of their importance as indices (or lack of indices) of capacity to meet job situation demands.

- c. The ability to conduct an interpretative interview in which a sound perspective is maintained as data are gathered from the past experience of the applicant to lend support to, or to give refutation to, the disclosures from the tests.

It is unusual to find personnel clerks with that training; in consequence there is one and only one alternative before management. It is this: train the personnel clerk in the technician's part, but reserve the interpretative part for the experienced industrial psychologist. If that is not practicable Don't Touch Tests.

III. *Research.* No permanent value will be gained from tests unless provision is made for the continuous gathering of data, for constant check on the value of the tests in use, and for such modifications in tools, techniques, and standards as the results from research justify. This can be cared for by a personnel clerk under the direction of an industrial psychologist. Too often the practice of installing and standardizing a group of tests is adopted and maintained without check on their validity, and without recognition of the changes that have taken place in job standards, job methods, or even in the calibre of available applicants. It is only by frequent check and occasional change that the most valid results can be gained from a test selection program.

IV. *Undue Confidence in the Results from Personality Tests.* The great percentage of job failures above the semi-skilled level are due to personality factors, whose interplay and strength cannot be accurately measured by any known test. Signs of danger and promise can be provided by appropriately selected and administered personality tests, but until these signs are corroborated by illustrations of their expression in the past social and work experience of the applicant they are academic and statistical anomalies—and nothing more. If estimates of personality promise are to be made, the results from tests must be reviewed with the applicant and interpreted by someone who relates them to a workable theory of personality, and who has the capacity to gain the honest confidence of the most ardent self-seeker. Properly used personality tests can reveal signs that no other available tool can provide, but complete confidence in the results from such tests and the pronouncements of judgments from their disclosures have one inevitable result—the abandonment of the test.

V. *Undue Confidence in the Industrial Psychologist.* The interpreter of tests frequently acquires the status of a judge, before whom earnest seekers for security parade with trepidation. He is beyond his depth and his province when he reaches such status. Fundamentally he is an integrator and an interpreter; he should be able to discover the silver lining of promise, and indicate the channel through which it can be used and the dangers that threaten its success. He should provide the guards to eliminate or destroy the effectiveness of these threats, and should provide the

props that will strengthen assets. The information that he gathers and interprets should be related to and supplemented by information gathered from other sources, and these sources should be used to throw light on doubtful or threatening factors that are revealed by the tests. It is in this manner that references can be of most value; when they are used to check the frequency with which characteristics have been apparent in the work or social situation that seem disturbing in a test personality pattern, they contribute to the estimate of the seriousness of the danger points that make the applicant a questionable entity.

HOW TO USE TESTS

Reliable results cannot be gained from tests unless the foundations are laid on the basis of which a test program can be developed and standardized. The essential steps for gaining that value are the following:

1. Build an organization chart which shows job levels and transfer and promotional possibilities. This chart should be constructed by departments and in an overall manner.

2. Analyze the job-situation descriptions on the basis of which the organization chart has been developed.

3. Translate the job descriptions into human demands in terms of the specific qualities, abilities, experiences, and general and specific training that have been found necessary to enable job occupants to meet these demands with average success.

4. Equate the measurable parts of these demands with objective tools for appraising their strength. By such analyses and comparisons it will be found that there are many aspects of job situations, particularly those above the skilled level, for which there are no known objective measures and no available methods of constructing such. Recognize this, establish subjective means of gathering estimates, and integrate the findings with the results from objective measures.

5. Select each apparently measurable entity, choose the most likely test or battery of tests for appraising its strength, or construct tests which give promise of estimating its strength, and establish their value by administering them to employees on incentive jobs on whom fairly accurate production measures are available. For non-incentive jobs, the comparisons may be made by means of a specially constructed rating scale that provides estimates of employees' expression of the same qualities or abilities that are measured by the tests. Adopt the test as an appraisal tool only when it shows statistically reliable differences between above- and below-standard producers. Repeat the same process with every measurable entity.

6. Periodically review the results by checking selections and promotions against performance, paying particular attention to employees who have not met the promise indicated by the test; and supplement the test pro-

gram as job failures indicate the specific ways in which the tests are inadequate.

If these steps are followed it will be wise to concentrate initial efforts on employees on whom the work situation places similar demands, and maintain records that indicate reduced labor turnover, increased quantity and quality production, and increased morale before undertaking the task of establishing test measures for other groups. The easiest groups with whom to experiment are those working on fair standards; the most difficult group is that on which there are no company records to give comparative achievements. Company-wide benefit will be gained if progress is made step by step from the known, i.e. the measured employee, to the unknown, i.e. the unmeasured employee.

STUDIES IN INTERNATIONAL MORSE CODE

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I. THE VIMY CODE LETTER TEST¹

In connection with the development of an accurate means of determining code retentivity there arose the necessity for a standard test for measuring proficiency in receiving International Morse Code.

After considerable investigation and study of a test developed in the United States, a new test was devised by the Canadian Army Operational Research Group at the Canadian Signal Training Centre, Kingston. The material for this preliminary test, like the test developed in the United States, consisted of equal frequency mixed-letter and mixed-letter-and-number cipher arranged in groups of five. Under the designation, Vimy Code Receiving Test, it was given to 450 men and their records were carefully studied. An error analysis showed that approximately three-fourths of the errors made were due to confusing letters with numbers. The preponderance of number-letter errors in the V.C.R. Test evidently masked differences in training progress and thus reduced the effectiveness of the test as an achievement measure.

Consequently it was found necessary to construct a test composed of letters only to provide a more adequate means of indicating code proficiency. The Vimy Code Letter Test was the result.

The test material of the Vimy Code Letter Test is arranged in the form of five-character cipher groups. All letters of the alphabet appear with equal frequency, and each group contains exactly 41 bauds. The baud is the basic unit of code. It is equal in duration to a single dot

¹*This is the first of a series of five papers.*

and is the shortest interval of sound or silence employed in Morse. Each sub-test is composed of an initial warm-up series of 24 different letters, followed by 156 characters of test material made up of 6 complete alphabets. Three alphabets form the first half and three the second half of each sub-test. The order of presentation is systematically varied in the sub-tests.

The sub-tests are grouped to form three batteries. The Elementary Battery contains 4 sub-tests at the rates of 4, 6, 8 and 10 words per minute. The Intermediate Battery consists of 5 sub-tests at the rates of 8, 10, 12, 13.7 and 16 words per minute. The Advanced Battery contains 6 sub-tests at the rates of 12, 13.7, 16, 18.5, 19.2 and 20 words per minute. (Due to the limitations of the Wheatstone transmitter, fractional word per minute rates must sometimes be used if the desired letter space to group space ratio of 3 to 5 is to be maintained.)

Rates of transmission are calculated in relation to the standard word "Paris." Thus 10 words per minute means that rate at which 10 "Parises" are transmitted in one minute. (This will be explained in a later article.)

Testing time for the Elementary Battery is 29 minutes, for the Intermediate Battery 22 minutes and for the Advanced Battery 20 minutes.

There are two forms for each battery. In Form B the order of presentation of the characters within each group and the order of the groups of Form A are changed.

Each battery is introduced by a practice exercise. The practice exercises, like the tests, are arranged in five-character cipher groups of 41 bauds each. The practice exercise for the Elementary Battery consists of 50 characters, 2 less than 2 complete alphabets. It is given at 4 words per minute. The practice exercise for the Intermediate Battery contains 75 characters, 3 letters less than 3 complete alphabets. It is given at 8 words per minute. The practice exercise for the Advanced Battery contains 100 characters, 4 characters less than 4 complete alphabets. It is given at 12 words per minute.

The first two or three letters of the practice exercises and of the sub-tests serve as identifiers to make certain that the proper stencil is used in correction.

The test was originally cut on tapes for use with a Wheatstone transmitter regulated to pull 480 centerholes of tape per minute. These tapes were later used in making phonograph recordings.

Individual record booklets, class nominal rolls and complete directions for administration, scoring and checking have been prepared.

Chance half correlations were computed by counting errors made on the first three alphabets of each sub-test and then correlating these with errors made on the last three alphabets. Total first-half errors made

by 171 Regimental Signallers on sub-tests given at 4, 6 and 8 words per minute when correlated with second-half errors on the same tests yielded a co-efficient of correlation of $r = .89 \pm .01$. When this was corrected by means of the Spearman-Brown formula for predicting reliability of the whole test the correlation co-efficient became $r_{nn} = .94$. When total first-half errors made by 171 Operators Wireless and Line on sub-tests at 10, 12, 14 and 16 words per minute were correlated with second-half errors on these tests, the resulting co-efficient of correlation was $r = .91 \pm .01$. The corrected co-efficient was $r_{nn} = .96$.

Nineteen operators were given both the A and B Forms of the V.C.L. Test, Intermediate Battery. A co-efficient of $r = .90 \pm .03$ was obtained when total errors were correlated.

Thirty-two Regimental Signallers were given the Elementary Battery, Form A, the test being repeated immediately. A correlation co-efficient of $r = .93 \pm .02$ was found when errors made on the 8 words per minute sub-test were correlated with retest errors. When total errors on test and retest were correlated the resulting co-efficient was $r = .90 \pm .02$.

Tests and retests (the following day) were also made by giving the Intermediate Battery, Form A, with 12 Operators Wireless and Line and 28 Fixed Wireless Station Operators as subjects. When errors made at 12 words per minute on the test were correlated with retest errors on the same sub-test a co-efficient of $r = .83 \pm .03$ was obtained. When total test-retest errors were correlated the coefficient of correlation was $r = .89 \pm .02$.

As an experimental tool, the V.C.L. Test may be employed to evaluate methods of selection and training or to provide a means for the determination of the effect upon efficiency of such factors as boredom or fatigue. It may also serve as a basis for finding out the relative difficulty or confusability of Morse characters.

In training, the test may be used to secure motivation, to measure progress, or to diagnose errors of a particular operator. It may also be used as a partial requirement for upgrading men during code training or for final qualification.

The Vimy Code Letter Test has already been used with over one thousand operators as a pre-qualification test. It has also been given to several hundred student operators as a measure of progress in training. The V.C.L. Test was used overseas in connection with the determination of loss of code retentivity.

THE RELATION OF COLLEGE APTITUDE SCORES TO PERFORMANCE IN COLLEGE COURSES

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For the past two years new students at the University of New Brunswick have been required to take the Thurstone Psychological Examination for College Freshmen. There were two main reasons for this. One was to get a picture of the sort of group entering the Freshman class, and to have some data in addition to the usual examination marks at the end of the term. As in other universities, the numbers during the past two years have been swelled by the returning veterans. Many of these have been away from school and study for a long time, and their matriculation marks are not always indicative of their potentiality as students. Another reason, of course, for giving the college aptitude test was to discover the degree to which the scores could be used for prediction, and to what extent the test could be used as an aid in counselling.

As all those connected with counselling students will appreciate, the demand on the psychologist or other counsellor is very exacting at the present time. The college population is heavily weighted with individuals who are older than average and impatient to carve out their permanent careers. They are anxious to obtain all the help they can in making wise choices, and often seek psychological service in the fond hope that they will find out exactly what they are suited for occupationally. Unfortunately, no precise tests are yet available for predicting the "one job" in which the individual will be most successful, particularly when a college population is involved. Any aid, however, which will help the student to make a wise choice, serves a useful purpose. Our experiment, therefore, at the University of New Brunswick, is an attempt to estimate, (1) the value of the Thurstone test in general prediction of the performance for the group, and (2) the extent to which the test may be used in individual counselling.

Throughout this discussion, mention will be made of two groups, A and B, two Freshman classes of last year. Their Thurstone scores will be compared with their subsequent performance on various subjects of the first year. The groups are treated separately, for the reason that group A began in September and went through the normal college year, studying all six subjects concurrently, while group B began the college year in February and studied through to the beginning of August. Group B studied three subjects for three months, and the remaining three subjects for the next three months; their learning, then, was by the massed technique. It was thought that this circumstance would probably have some effect on their scores, so they were treated as a separate group. Furthermore, they took

examinations which, although similar to, were not identical with, those given to the first group. There were 256 students in group A and 159 in group B. Correlations between Thurstone scores and college subject scores were worked out only in cases where there were substantial numbers taking the subject concerned. To any who may not be familiar with the Thurstone test of college aptitude, it should be pointed out that three separate scores are made available. The L (Linguistic) score is the sum of the scores on three verbal sub-tests, the Q (Quantitative) score is the sum of the scores on three mathematical sub-tests, and the gross or total score is the sum of the two. Some individuals score high on both L and Q, some score low on both, and many show wide differences between the two scores.

TABLE I

Variables	Group A	Group B
English vs. Thurstone Totals . . . . .	.46 ± .051	.60 ± .036
English vs. Thurstone L Scores . . . . .	.47 ± .050	.63 ± .033
Mathematics vs. Thurstone Totals . . . . .	.38 ± .038	.38 ± .047
Mathematics vs. Thurstone Q Scores . . . . .	.44 ± .036	.41 ± .045
Chemistry vs. Thurstone Totals . . . . .	.37 ± .040	.34 ± .049
Chemistry vs. Thurstone Q Scores . . . . .	.43 ± .038	.46 ± .045
Physics vs. Thurstone Totals . . . . .	.35 ± .054	.39 ± .049
Physics vs. Thurstone Q Scores . . . . .	.37 ± .053	.42 ± .048
French vs. Thurstone Totals . . . . .	.32 ± .049	.21 ± .066
French vs. Thurstone L Scores . . . . .	.36 ± .048	.28 ± .062

It will be noticed in Table I that in both groups the correlations between Thurstone scores and English marks are the highest. Another interesting feature is that the total Thurstone score (which includes both mathematical and verbal tests) shows almost as high a relationship with results in English as does the verbal score taken alone. As in all tests of this type, the Thurstone scores do not indicate the degree of motivation or initiative inherent in the candidates; nor do we know from the scores which students will study more or which will have many interests competing with their college work. The correlation, therefore, of .63 between English and Thurstone language scores is fairly high, considering the various factors that affect grades in college. The correlations between English and Thurstone scores for group A are considerably lower than for group B, although still the highest of all subjects. The indication from the data we have is that the Thurstone scores are a better prediction of group performance in English than in any other subject. In the case of French, the Thurstone scores do not correlate very highly with the subsequent marks in the Freshman year, the higher of the two groups showing a correlation of only

.36. As with the English, the correlation with the L sub-scores is only slightly higher than the correlation with the total. To sum up the results on Freshman language: Thurstone scores, either totals or L scores, give a fairly good prediction of later performance in English during the Freshman year. The relationship with French, although definitely positive, is much lower than for English, and it would appear that for this subject Thurstone scores do not predict very accurately the later performance of the students.

Let us now turn to the other subjects; Mathematics, Physics and Chemistry. (There are, in addition, other first year courses—Latin, History, German and Draughting. For various reasons—small size of the class, nature of the subject, and the like—these latter subjects were not included in the study.) For Mathematics, Physics and Chemistry, correlations were found between the college scores for the year in these subjects and, (a) total Thurstone scores, and (b) Q sub-scores. The three subjects were not markedly different from one another in the degree to which success correlated with Thurstone Q scores. The coefficients ranged from .37 to .46, with Chemistry having a slight advantage over the other two. In every instance, Q scores had better predictive value than did total scores. The advantage of Q scores over total scores for prediction showed up best in Chemistry for group B, where the two correlations differed by .12.

From the data presented here, the Thurstone test shows a definite positive correlation with college marks, but the correlations are not high, except in the case of English. Part of the explanation may lie in the fact that a low score may be made on the Thurstone for a variety of reasons—lack of motivation, failure to understand the explanation of one or more sub-tests, being a slower-than-average worker, and the like. Also, as pointed out previously, a high score merely indicates potentiality and may or may not be matched by later performance in college courses.

The second problem considered here is that of investigating the extent to which the Thurstone scores may be used in counselling. Although the correlations of Thurstone scores with college marks are almost as high when the total is taken as when a partial score is used, nevertheless many students show a wide difference between partial scores.

Table II presents the differences found in percentile ranks between Q and L scores for groups A and B. They are grouped according to the percentile rank achieved on the total score.

It will be noticed that 34 students or about 8 per cent of the total showed differences of 20-24 in percentile rank, that 41 or about 10 per cent showed differences of 25-29, that 44 or about 11 per cent showed differences of 30-39, and that 63 or about 15 per cent showed differences of 40 and over. Altogether there were 44 per cent of students with differences of more than 20 in percentile ranks. From these data it would appear that fairly wide differences in L and Q performance are to be expected.

TABLE II
RELATION BETWEEN TOTAL SCORES AND DIFFERENCES BETWEEN
L AND Q PERCENTILE RANKS

Differences in L and Q Percentile Ranks	Top Quarter in Total Score		Second Quarter in Total Score		Third Quarter in Total Score		Bottom Quarter in Total Score	
	A	B	A	B	A	B	A	B
20 - 24	7	6	4	1	5	3	4	4
25 - 29	4	6	11	1	8	4	2	5
30 - 39	7	3	10	8	6	4	4	2
40 and over	5	6	11	8	15	12	5	1

It will be noticed also that where the L and Q percentile rank differences are large, there is a tendency for the students in the middle quarters rather than for students in the top or bottom quarters to exhibit these differences. This might be interpreted as indicating a greater consistency in performance for the most able and the least able students. On the other hand it may be purely a statistical phenomenon. Those who make extremely high average scores have very little likelihood of achieving a large difference: a candidate who managed to make a perfect record would obviously occupy the 100 percentile position in both L and Q. Similarly for those who made extremely low scores. The opportunity for large differences comes to those in the middle ranges.

Let us now see what the situation is when failing students are considered as a group. Is there any evidence that students who fail have actually a satisfactory percentile rank on one or other of the Q or L scores, but are taking subjects that do not draw on their stronger abilities? Analysis of scores was done on 32 sophomore students who failed on more than three of their Christmas examinations. Of this number, 16 had a difference of more than 20 in percentile rank; and of these, 8 had a difference of more than 40. It was observed, however, that these 16 students were evenly divided as to the relation between their better scores and the courses they had selected. One half were in the courses which capitalized on their better abilities, but one half were not. Reasons other than differences in Thurstone scores must be sought to explain why these students failed in particular subjects.

To sum up, the Thurstone scores may have a limited use in counselling. It is advisable, however, to get additional data by administering individual tests of intelligence or aptitude, by using available achievement scores, and by learning the interests of the student through interviews. The problem of the failing student is one on which further research needs to be done, since for half the cases in our data there appear to be factors other than aptitude (as measured by the predictive test) involved.

THE FIELD CONCEPT IN PSYCHOLOGY

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THE field concept promises to stand as a valuable, even necessary, addition to the stimulus-response formula. A half-century of experimental work has proved that an organism does not respond to a stimulus merely, but to a stimulus in the meaning it has for that organism. All attempts to eliminate this factor of meaning, by such devices as nonsense syllables with human subjects, have entirely failed. The field concept enters as an indispensable aid in giving a necessary measure of objectivity to stimulus-meaning.

The field is the configurational context or objective world to which the stimulus or stimulus constellation belongs. It is external, inasmuch as it possesses the properties of space and its events are determined by the causal nexus. But it is also organized dynamically, since its configurations are determined as well by the goal-seeking activities of the organism. The outstanding objects it contains are either related as goals to the needs of the organism, or, instrumentally, as pathways or tools, as obstacles or barriers, to the attainment of this or that goal-object, and it is this relation primarily, which gives them their meaning.

How then, it may be asked, does the field as thus described differ from the world of individual perception? And since this latter is greatly influenced by the past experience of the percipient organism, does not the field become an exclusively individual context, and the meanings it suggests wholly subjective? To such objection, it may be replied that the field is the world of *common* perception. This, however, is to state a fact rather than to explain it.

So far as the primary field of human action is concerned, an explanation is found in the standardizing, regularizing, effect upon the behavior and experience of the individual, of the social culture in which he is reared. The human being grows up in an environment in which land has been divided and fenced, roads and streets laid out and houses built, in which tools and appliances are readymade for use, in which methods of household management, of industrial production and of governmental control are in operation, in which a developed language is acquired, spoken and written—all with a view (or at least a reference) to the satisfaction of common human needs. Such instrumentalities depend for their effectiveness upon specific cause-effect and means-end relationships which hold true for all individuals in different times and places. The individual cannot employ them in everyday life without being made aware of these underlying relationships which give the perceived world an ordered structure, identical or very similar with all human percipients. He cannot, for example, use

a tool without gaining some insight into the relation between its cutting edge and the material on which it works, and between the effects it produces and the final result at which he aims. He cannot, above all, speak and write the language of his cultural group and read the writings of its members of his own and former times, without being continually reminded by phraseology and grammatical forms of the distinguishing qualities and uniformities of action characteristic of things and people in the world of his everyday behavior.

The field concept is also indispensable to the psychologist in accounting for the objective meaning possessed by stimuli arising out of the interaction and intercommunication between human selves. This distinctively social field has its external aspect, consisting of the verbal communications together with the mechanical reproductions of spoken and written words by such agencies as printing and radio, of the inventive skills practised in domestic life, industry and government along with the mechanical devices and technical methods they have produced, and of emotionally expressive movements and their portrayal by a variety of means and media from photography to fine art. These externally occurring modes and manifestations of social intercourse are at the same time organized dynamically by the contribution they make to the realization of the goals, norms and values which govern the social life of the group. The social field is, in short, the society of interacting, intercommunicating persons, together with their modes of institutional relationship, their goal-objects, and the established procedures, competitive and co-operative, by which they seek to attain them. It functions as a common objective context by which group-members interpret and give meaning to the words, actions and significant looks and gestures of their fellows.

If men are to participate in co-operative undertakings, they must understand one another, and reach a measure of agreement as to goals, plans, and methods of operation. This is accomplished by discussion, helped out by practical demonstration. In such discussion the appeal of participants is to the world of actual fact; and agreement, when reached, is generally on this basis. This 'world of fact' is no other than the social field, and consists of the accepted beliefs of the group concerning man and his environment, its accumulated stock of information about human life and the natural world, its approved technologies, and its established modes of social adjustment in family, local community and nation. This system of ideas, techniques and institutions, is accepted because it has been tried in practice and to some extent confirmed by the success of previous generations in their struggles for survival and satisfaction. Practical experience would thus indicate a substantial degree of accord between such social context and the actual constitution of human personality along with the specifically social relationships on which its development depends. This much basis in

psychological and sociological fact would remove the social field from the realm of mere individual impression and opinion, and give objectivity to such meaningful interpretations of social stimuli as it might suggest.

A third context which may determine the meaning of sensory stimuli is the scientific. A piece of paper with black marks on it may mean: (1) combustible material to be used in starting a fire, (2) a government proclamation to be read and discussed, or (3) an assemblage of atoms, electrons, protons, etc., to be analyzed in the laboratory and explained by the laws of chemistry. The scientific world is the real universe, externally existent in space-time. It is also dynamically organized—not with reference to the biological or social, but rather the intellectual, needs of man. For the objects which compose it can be known only if they possess sufficient identity of character and coherent organization to be comprehended in their systematic totality. The scientific worker proceeds on the assumption that the world is an intelligible, that is to say a coherent, system, and only to the extent that this assumption is borne out by the results of his investigation does he make progress in understanding it.

THE KUDER PREFERENCE RECORD IN A STUDENT VETERAN COUNSELLING PROGRAMME

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THE Veterans' Counselling Bureau was organized at the University of British Columbia in 1945 to provide ex-service personnel an opportunity to obtain assistance in solving their present problems, and in planning for their future. Counsellors have made considerable use of various psychological testing instruments in the counselling programme, relevant tests being used as the occasion required. Interest inventories seemed to provide useful material for an interview, with the result that the Kuder Preference Record has been taken by several hundred student veterans. This paper provides information on mean and sigma values, decile values, reliabilities, and intercorrelations of the scales, based on an analysis of 400 records.

MEANS AND SIGMAS

Table I shows the means and standard deviations on each scale, together with those reported by Triggs on 166 college students, and McCall on 169 freshmen (see Kuder's Manual of Directions).

TABLE I
MEANS AND SIGMAS

Scale	Triggs		U. B. C.		McCall	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. Mechanical	68	22.2	69	24.5	77	22.1
2. Computational	35	12.6	37	12.3	35	9.5
3. Scientific	68	18.4	64	15.7	70	18.3
4. Persuasive	69	21.8	76	20.5	69	15.8
5. Artistic	44	16.0	47	16.5	47	15.1
6. Literary	54	15.7	57	19.0	49	17.1
7. Musical	20	9.9	19	9.7	20	11.1
8. Social Service	70	19.2	76	20.3	64	16.1
9. Clerical	48	15.4	55	16.3	55	12.0

It may be seen that there is both considerable similarity and considerable difference among the means and sigmas of the three groups reported. In this connection Kuder writes: "Norms for college students are being developed, although there is some question as to the value of general

college norms in view of the fairly wide variation in average scores among groups from different colleges." If this is so, the advisability of trying to develop norms for an intelligence test is also questionable for there is considerable variation in average scores in intelligence tests from different colleges.

COMPARISON OF DECILES

For certain scales it was observed that median values varied somewhat from the norms reported by Kuder, who noted that the absence of many young men from college at the time his norms were established may have made it difficult to obtain a representative group of male college students. Deciles based on the local population are shown in Table II together with Kuder norms.

TABLE II

LOCAL AND KUDER DECILE VALUES FOR EACH SCALE

Decile		Scale								
		1	2	3	4	5	6	7	8	9
9	Kuder	102	48	88	85	67	65	33	81	71
	U.B.C.	103	56	88	103	71	83	33	103	78
8	Kuder	95	43	82	78	59	58	27	74	64
	U.B.C.	91	49	81	94	61	75	28	93	69
7	Kuder	89	39	77	73	54	53	23	69	60
	U.B.C.	84	45	75	85	56	68	24	86	63
6	Kuder	84	37	73	69	50	50	19	65	56
	U.B.C.	76	41	69	79	51	62	21	81	58
5	Kuder	80	34	68	66	46	46	17	61	53
	U.B.C.	68	37	64	73	46	56	18	75	54
4	Kuder	74	32	64	62	43	43	14	58	50
	U.B.C.	61	34	60	67	42	50	15	70	50
3	Kuder	68	29	59	59	40	40	12	54	47
	U.B.C.	53	33	54	62	37	45	13	64	45
2	Kuder	60	26	54	55	36	35	9	49	44
	U.B.C.	45	24	47	56	33	40	11	58	40
1	Kuder	50	23	47	49	30	30	6	42	38
	U.B.C.	36	18	40	48	27	32	7	49	33

The local norms are now used in interpreting scale values, although some criticism might be levelled at this procedure. Until more evidence on the occupational meaning of decile scores is obtained it would seem, however, that counsellors are justified in interpreting a score in terms of the local population. Further, this seems to be a reasonable procedure since Kuder writes in the manual of directions: "The listings in the fol-

lowing table are meant to be suggestive only. The classifications of a number of occupations are based on actual data. Many of the occupations, however, are listed because their duties appear to be consistent with the activities of the scale or scales under which they are classified. Scores are being collected systematically from people in various occupations, but for the present, the classifications given must be regarded as tentative for many of the occupations listed."

INTERCORRELATIONS

The manual of directions reports the results of six studies of intercorrelations on different groups of subjects. Kuder notes that the intercorrelations tend to be low, especially among scales 2 through 8. The relationships between the scales for the present samples were determined by means of the diagrams prepared by Thurstone and others for computing tetrachoric correlations. The intercorrelations reported by Triggs are given for comparative purposes in Table III, above those obtained in the present study.

TABLE III

INTERCORRELATIONS

	2	3	4	5	6	7	8	9
1. Mechanical	-.08 -.19	+.47 +.70	-.18 -.35	+.16 +.16	-.50 -.57	-.40 -.43	-.17 -.34	-.34 -.37
2. Computational		+.22 +.22	-.15 -.22	-.33 -.28	-.06 -.25	-.13 -.34	-.25 -.21	+.56 +.55
3. Scientific			-.40 -.49	-.11 +.03	-.19 -.48	-.30 -.27	-.20 -.16	-.26 -.39
4. Persuasive				-.25 -.25	+.11 +.18	-.03 .00	-.02 +.14	+.11 +.14
5. Artistic					-.19 -.07	+.04 +.21	-.22 -.35	-.30 -.39
6. Literary						+.19 +.14	-.18 -.06	+.06 +.14
7. Musical							-.01 -.01	+.16 -.11
8. Social Service								-.30 -.25
9. Clerical								

It may be seen that there is considerable similarity between the results here reported and those found by Triggs. In 13 of the 36 intercorrelations the difference exceeds .10; only three of the differences exceed .20: mechanical-scientific; scientific-literary; computational-musical. The highest inter-

correlations are mechanical-scientific (.70), mechanical-literary (-.57), computational-clerical (.55). Three others are in the .40's.

In general the correlations are low and negative. The intercorrelations for the present study will be quite reliable since the tetrachoric correlation is based upon 400 cases, and since the dichotomy was made at the median. Twenty-two of the correlations are significant at the 1% level (exceeding .20) and four others at the 5% level (exceeding .15). In the main, it would appear that the various scales are measuring unique interest factors.

RELIABILITY COEFFICIENTS

The reliabilities of the various scales of the Kuder Preference Record in the present study were determined by formula IV as developed by Kuder and Richardson. The coefficients are shown in Table IV, together with those reported by Triggs in a study of 166 college students. Probable errors of measurement are also reported for the present sample.

TABLE IV
RELIABILITY COEFFICIENTS AND PROBABLE ERRORS OF MEASUREMENT

Scale	Triggs	Present Study	
	r	r	P.E.m
1. Mechanical	.94	.93	4.3
2. Computational	.90	.84	3.3
3. Scientific	.93	.84	4.2
4. Persuasive	.93	.89	4.6
5. Artistic	.91	.88	3.8
6. Literary	.90	.87	4.6
7. Musical	.90	.86	2.7
8. Social Service	.91	.89	4.5
9. Clerical	.89	.86	4.1

From the table it is to be observed that the coefficients tend to be rather high but are consistently lower than those reported by Triggs. Except for "mechanical" the reliability coefficients here reported are slightly below the standards usually required for individual diagnosis. The more accurate reliability formulas suggested by Kuder and Richardson would probably raise these coefficients as there appears a distinct tendency for coefficients determined by formula IV, to be lower than those obtained by other methods. The probable errors of measurements should be compared with the differences between decile values shown in Table II, and considered in interpreting decile values.

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